

## **PERSNICKETY<sup>®</sup> BRAND ODOR COUNTERVAILANT 612 Spray Atomization/Topical Spray Formula**

### **GENERAL DISCUSSION**

Malodorous air cannot always be economically and efficiently collected and scrubbed. Similarly, malodorous liquids and solids cannot always be successfully treated by direct chemical addition. The most prominent alternative methods of treatment are spray atomization (a fine mist sprayed into the air) and topical spray (a coarser spray onto malodorous liquids or solids).

PERSNICKETY<sup>®</sup> Brand Odor Countervailant 612 Spray Atomization/Topical Spray Formula is compounded to replace masking agents, acid/base products and odor neutralizers in both applications. The intent of masking agents is to superimpose a fragrance odor over a malodor. Often both are detected. Odor neutralizers add a second odorous substance (not a fragrance) so that the combination is inoffensive. 612 Formula incorporates counteraction technology, but expands considerably beyond it. Additional facets of PERSNICKETY<sup>®</sup> Countervailant technology include polymeric adsorption and esterification. 612 Formula provides the following very important advantages:

### **Superior Malodor Control**

- Able to react in both liquid and gaseous phases.
- Used successfully on even the most complex and intensive combinations of organic and inorganic malodors.
- Functions effectively in all operating ranges of temperature and pH.
- **IMPORTANT NOTE:** Because 612 Formula works so effectively, pay special attention to appropriate safety procedures when entering confined spaces.

### **Improved Safety for Operators and the Environment**

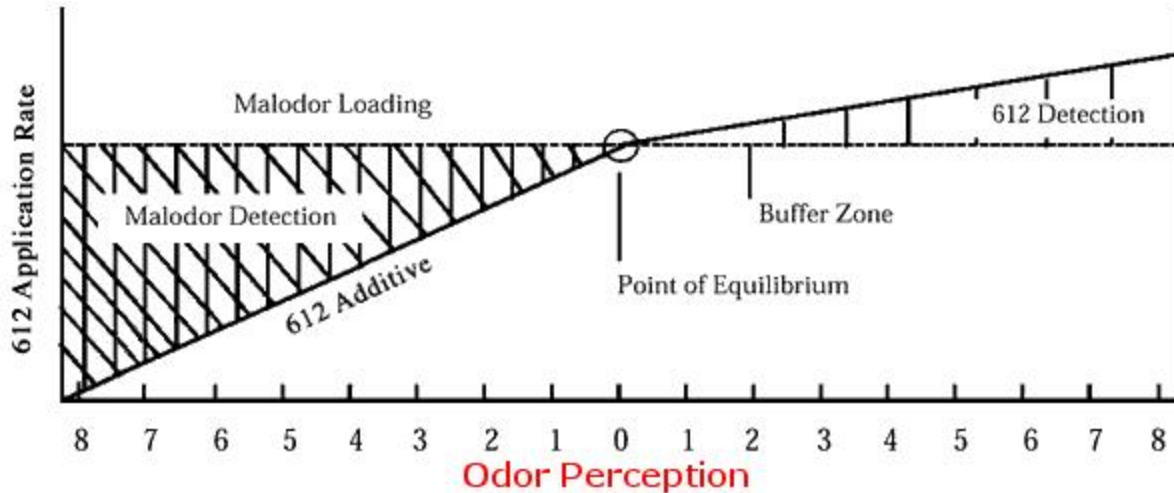
- Contains no toxic materials and forms no toxic by-products.
- Is non-explosive, non-flammable and non-corrosive.
- Biodegrades fully and forms no damaging decomposition by-products.
- Meets national and international health and safety standards.

### **More Economic**

- Normally reduces chemical operating costs.
- Reduces or eliminates costs associated with nozzle plugging.
- Potentially allows avoidance of litigation costs via more effective malodor control, and improves operator morale and productivity.

### APPLICATION INFORMATION

Application rates for 612 Spray Atomization/Topical Spray Formula are largely dictated by the intensity of malodor. The proper rate establishes an equilibrium between malodor and 612 Formula. This equilibrium is illustrated below.



In practice, a constant level of malodor is not always present. Intensity variations occur. Therefore, many customers choose to operate with a faint odor of 612 Formula present to act as an olfactory guide in order to provide a buffer zone. PERSNICKETY® 612 Formula is supplied in concentrated liquid form, and is designed to be applied in a diluted state. The precise application rate must be determined on site. The intensity of malodor is foremost in determining application rate, but several other factors weigh heavily as well. Details are provided below.

#### STARTING RECOMMENDATIONS (concentrated 612 Formula)

| APPLICATION TYPE  | DILUTION (Water : 612) |
|-------------------|------------------------|
| Spray Atomization | 50 – 150 : 1           |
| Topical Spray     | 30 – 75 : 1            |

Spray Atomization – The water : 612 Formula solution is forced through a small nozzle orifice to create a mist. This is accomplished by pressurizing the liquid or in conjunction with compressed air atomizing equipment capable of producing atomized particles of 10 to 40 microns. Small particles provide greater surface area and create greater opportunity for contact with gaseous malodors. In addition to particle size, the effectiveness of a system depends on strength of solution, number and spacing of nozzles, nozzle delivery rate and contact opportunity. The best contact opportunity is obtained by atomizing as near to the malodor source as possible (point source) or in confined spaces — e.g. over a tank or channel, or into a duct exhausting a production process. Air volumes, velocities and physical dimensions of the treated area are factors to consider. Often point source application is the only or primary method of treatment, but it can also be usefully employed as a secondary method. For example, carbon filter or thermal incinerator stacks can be supplemented with spray atomization systems to polish or finish the job. Where spray atomization systems are employed on open sites (such as around the

perimeter of a pond) or in barrier fashion (such as along a fence line bordering a residential neighborhood), complete contact and malodor control is more difficult to achieve. While clear improvements can be made, economics often dictate that realistic targets or levels of improvement be sought. Topical Spray – Applications such as sludge cake storage areas, solid waste collection vehicles and bins, dirty drums and tanker trucks, and refuse piles lend themselves to the direct application technique of topical spray. Application systems vary in sophistication from automatic metering, mixing and spraying at the end of a belt press, to pressure washers and garden sprayers. All share the characteristic of a coarse spray, as compared to spray atomization.

| <b>PHYSICAL AND SAFETY DATA</b> |  |
|---------------------------------|--|
| Weight per Gallon               | 8.34 lbs   |
| Weight per Liter                | 2.2 lbs.   |
| Specific Gravity @ 77° F        | 1.0  |
| Specific Gravity @ 25° C        | 1.0  |
| Boiling Point ° F               | 208°   |
| Boiling Point ° C               | 98°  |
| Flash Point ° F                 | > 200°   |
| Flash Point ° C                 | > 93.3°  |
| Solubility in Water @ 77° F     | Soluble  |
| Solubility in Water @ 25° C     | Soluble  |
| Color                           | Green  |
| Toxicity                        | Non-toxic, non-hazardous. Good housekeeping procedures and general principles of safety should be observed when handling any chemical product.   |
| First Aid                       | Skin contact – in cases of prolonged skin contact, wash off with soap and water. If any irritation exists, seek medical advice.<br>Eye contact – wash eyes with lots of water for at least 10 minutes and seek medical advice.<br>If swallowed – drink lots of water and seek medical advice immediately.<br>Consult material safety data sheet. |
| pH                              | 7.1 – 7.3  |
| Corrosivity                     | Non-corrosive  |
| Biodegradability                | Fully biodegradable  |
| Packaging                       | 5 U.S. gallon pails, 55 U.S. gallon drums  |
| Shelf Life                      | 12 months in unopened containers   |
| Storage                         | Protect from freezing. Do not store in temperatures above 120° F, 48.9 ° C.  |

**Limited Warranty:**

Our only obligation shall be to replace or pay for any material proved defective. Beyond the purchase price of materials supplied by us, we assume no liability for damages of any kind and the user accepts the product “as is” and without warranties, expressed or implied. The suitability of the product for an intended use shall be solely up to the user.